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# **Determinants of subjective wellbeing in people with psychosis referred for psychological therapy in South London**

Annabel Broyd<sup>1</sup>, Suzanne Jolley<sup>1</sup>, Louise Johns<sup>1,2</sup>.

<sup>1</sup>King's College, London, Institute of Psychiatry, Psychology and Neuroscience (IoPPN),  
Department of Psychology.

<sup>2</sup>Oxford University, Department of Psychiatry, Oxford, UK

## **Abstract**

### **Objectives:**

Improving subjective wellbeing (SWB) for people with mental health problems is a United Kingdom national health priority, and is increasingly important in justifying funding of mental health services. Aside from the economic advantages, maximising SWB confers obvious individual and clinical benefits for people with severe mental illness, such as psychosis. Gaining a better understanding of wellbeing and its determinants will enable current evidence-based interventions to be targeted and refined appropriately. This study therefore sought to identify the cross-sectional correlates of SWB in an Improving Access to Psychological Therapies–Severe Mental Illness (IAPT-SMI) psychosis demonstration site, to inform a future longitudinal investigation.

### **Methods:**

Participants with a psychosis or bipolar spectrum diagnosis referred to the demonstration site ( $n=410$ ) rated SWB as part of their initial assessment before starting psychological therapy. Potential influencing factors including age, gender, ethnicity, employment status, illness duration, perceived social support, perceived coping and psychotic symptoms (voices and beliefs) were also assessed.

### **Results:**

Regression analyses showed that unemployment ( $\beta=-.16, p<.001$ ), lack of social support ( $\beta=-.20, p<.001$ ), distressing beliefs ( $\beta=-.12, p=.004$ ) and poorer coping ( $\beta=-.43, p<.001$ ) were associated with reduced SWB, together accounting for 43% of the variance in wellbeing ( $F(5,392)=58.42, p<.001$ ; mean SWB=39.09,  $SD=11.61$ ).

### **Conclusions:**

This study provides preliminary insights into the determinants of SWB in a large sample of people with psychosis. Improving employability, social interactions, coping strategies, and

psychotic symptoms, may improve SWB. Further longitudinal investigation will determine the potential value of preferentially targeting these areas in therapy to meet national requirements to prioritise wellbeing outcomes.

Key Words: happiness; psychotherapy; cognitive behavioural therapy; family intervention

## **Practitioner Points**

- Average wellbeing in people with psychosis was lower than SWB previously reported for the general population.
- Unemployment, lack of social support, poorer coping, and distressing beliefs were all associated with lower levels of wellbeing in people with psychosis.
- Psychological interventions targeting the positive symptoms of psychosis may impact on wellbeing.
- Greater focus on promoting social contact and inclusion, and facilitating a return to employment may further improve wellbeing outcomes following psychological intervention.
- The cross-sectional design of the study does not allow for firm conclusions about the causal relationship between wellbeing and associated factors in psychosis.
- The study was carried out within a particular service context, and the findings need replicating before they can be considered to be generalisable outside this setting.

## **Introduction**

Subjective wellbeing (SWB) can broadly be defined as ‘happiness’, or a positive subjective state based on cognitive and affective evaluations of one’s life (Diener, 2000; Stewart-Brown et al., 2011; Tennant et al., 2007). Slade (2010) argues that SWB is a central component of recovery from mental illness, consistent with strengths-based and person-centred approaches (Mezzich & Salloum, 2007). Helliwell and Putnam (2004) suggest that SWB should be the ultimate dependent variable in mental health outcome studies (Resnick & Rosenheck, 2006). Standardised measures of SWB (Stewart-Brown et al., 2011; Tennant et al., 2007), based on this definition are now well-validated across a range of disorders and widely accepted, although debate about the precise definition and measurement of SWB continues (de Cates, Stranges, Blake, & Weich, 2015). SWB has consequently become the measurement of choice for the United Kingdom (UK) Government’s ‘Payment by Results’ initiative, whereby publicly-funded mental health services receive greater financial support for better outcomes (Department of Health, 2013). Evidence-based, recommended interventions for people with psychosis have previously targeted symptoms, distress and functioning (NICE, 2014), and may need to be refined to prioritise improvements in wellbeing (Brownell, Schrank, Jakaite, Larkin, & Slade, 2015; Riches, Schrank, Rashid, & Slade, 2015; Schrank et al., 2015; Schrank et al., 2014). This necessitates a thorough, condition specific understanding of the determinants of SWB.

In the general population, SWB is associated with better physical health and older age (Diener & Chan, 2011); female gender (Inglehart, 2002); social support (Gallagher & Vella-Brodrick, 2008); having social contacts or friends (Lucas & Dyrenforth, 2006; Pinquart & Sörensen, 2000; Tay & Diener, 2011); engaging in social activity (Cooper, Okamura, & Gurka, 1992); and perceived ability to cope (Headey & Wearing, 1990). Being unemployed

and not engaging in meaningful activity are detrimental to SWB (Cole, Daly, & Mak, 2009; McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Viinamäki, Koskela, Niskanen, Arnkill, & Tikkanen, 1993; Winkelmann, 2009). Both increased opportunities for social contact (Rüesch, Graf, Meyer, Rössler, & Hell, 2004), and being paid (Kilian et al., 2012) contribute to the positive effect of employment on wellbeing. SWB has also been shown to differ according to ethnicity (Helliwell & Putnam, 2004; Pinquart, 2001).

For people with psychosis, physical health (and life expectancy), opportunities for work and for social contact are all adversely impacted by the condition and its treatment (Bejerholm & Eklund, 2007; Shimitras, Fossey, & Harvey, 2003). Moreover, perceived coping ability may be negatively impacted by higher rates of adverse life experience and by distressing psychotic symptoms (Hatfield, 1989; Read & Ross, 2003; Varese et al., 2012). The psychosocial stress of stigma, social rejection and discrimination have been shown to have profound negative effects on SWB in psychosis (Magallares, Perez-Garin, & Molero, 2013; Markowitz, 1998), as has the emotional distress and poorer coping associated with psychotic symptoms (Freeman et al., 2014; Lambert et al., 2009). Based on these findings, the influence of established psychosocial determinants of wellbeing in the general population may differ for people with psychosis. Furthermore, studies to date have considered only specific factors associated with wellbeing in psychosis, thereby overlooking the relative contributions of these factors. Further research is therefore needed in order to establish the determinants of wellbeing in people with psychosis (de Cates et al., 2015), whether they are in the early stages of psychosis or have an established psychotic condition. This will clarify the key priorities for therapy so that wellbeing can be maximised within this disadvantaged group.

SWB was selected as one of the secondary outcomes in the nationally agreed dataset for the



psychosis arm of the UK Improving Access to Psychological Therapies for people with Severe Mental Illness (IAPT-SMI) initiative. This afforded the opportunity to investigate the psychosocial factors influencing SWB in people with psychosis referred for the psychological therapies recommended by the UK National Institute for Health and Care Excellence (NICE, 2014), within our South London and Maudsley NHS Foundation Trust (SLaM) IAPT-SMI psychosis demonstration site. We firstly wished to compare average levels of SWB in our sample with that of the general population, based on normative data collected by Stewart-Brown and Janmohamed (2008). Secondly, we sought to identify the factors associated with SWB at baseline, as a first step prior to a future longitudinal study of predictors of change following therapy. The overarching objective was to inform refinements to our current, recommended psychosocial interventions and maximise their effectiveness in terms of improving wellbeing, in line with national recommendations.

## **Method**

### *Service Background (Jolley et al., 2015)*

The SLaM IAPT-SMI psychosis demonstration site was set up to improve access to psychological therapies for people with psychosis as recommended by the UK National Institute for Health and Care Excellence (NICE; NICE, 2014). The service is coordinated by the Trust's specialist Psychological Interventions Clinic for Outpatients with Psychosis (PICuP) across two care pathways of the Psychosis Clinical Academic Group, as part of King's Health Partners: Early Intervention (EI), which targets first episode psychosis in people aged 18-35 years; and Promoting Recovery (PR), for adults (aged 18-65 years at first contact with services) with an established psychotic condition. The service offers Cognitive Behavioural Therapy (CBTp) and Family Intervention (FIp) for people with distressing positive symptoms of psychosis or those with a history of psychosis with secondary

emotional problems. CBTp involves weekly or fortnightly sessions for a period of six to nine months, and FIp involves fortnightly sessions over three to ten months.

### Participants

The sample included all referrals to the service from its start in November 2013 to March 2015 who had also completed a measure of SWB ( $n=410/412$ ; 99.5%). Participants had either schizophrenia spectrum diagnoses or psychotic symptoms in the context of bipolar affective disorder, or another affective disorder, and were referred from the South London boroughs of Southwark, Croydon, Lambeth and Lewisham. For detailed eligibility criteria for referrals to the IAPT-SMI service see Jolley et al (2015).

### Procedure

Assessments were completed prior to the start of therapy by graduate psychologists who were independent of therapy delivery. Assessments took place at community bases across the demonstration site; a minority of clients were visited at home. The study was approved by the SLaM Evaluation and Audit Committee (ref. PSYAUD/13/18).

### Measures

Demographic information [age, gender (male vs. female), ethnicity (BME vs. non-BME) and employment status (employed vs. unemployed)] were self-reported and corroborated by the medical record. Pathway (EI or PR) signalled whether people were experiencing first episode psychosis or had an established psychotic condition.

### *Wellbeing*

The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS, Tennant et al., 2007) is a

positively worded self-report measure with 14 items encompassing a broad range of attributes related to SWB. These include affective-emotional aspects (optimism, relaxation, cheerfulness), psychological functioning and cognitive-evaluative dimensions (personal development, autonomy, self-acceptance, competence, energy, psychological functioning, clear thinking) and satisfaction with interpersonal relationships. Items are rated on a five-point scale ranging from one (none of the time) to five (all of the time). Total scores range from 14 to 70, with higher scores indicating greater SWB.

The scale has good psychometric properties, with population norms of 50.7 (95% confidence interval (CI) 50.3 to 51.1; (Stewart-Brown & Janmohamed, 2008). The brevity of the measure makes it particularly appropriate for our target population, and the items map well onto our chosen definition of SWB (Diener, 2000). People with psychosis can consistently assess their SWB (Schimmelmann et al., 2005; Vothknecht, Schoevers, & de Haan, 2011), and WEMWBS has been shown to be feasible, acceptable and reliable for use with people with psychosis (Freeman et al., 2014). Factor analysis suggests it measures the single construct of wellbeing, is highly correlated with other wellbeing scales and seems less prone to social desirability bias than similar measures (Tennant et al., 2007). Importantly, the measure has received positive feedback from service users (Crawford et al., 2011) and may also be incorporated as a general measure of the quality of care provided by Mental Health Trusts as part of the government's 'Payment By Results' initiative (Department of Health, 2013).

### *Positive Psychotic Symptoms*

The Psychotic Symptom Rating Scales (PSYRATS, Haddock, McCarron, Tarrier, & Faragher, 1999) is a semi-structured interview assessing the characteristics and severity of

hallucinations (voices, PSYRATS-V) and delusions (beliefs, PSYRATS-B) over the last month. PSYRATS-V comprises eleven items and PSYRATS-B six items, each rated on a five-point scale from 0 (not at all) to 4 (all of the time). Psychometric properties are good (Haddock et al., 1999). Rather than using raw scores, the present study employed two separate dichotomous ratings of the presence (PSYRATS score > 0) of voices and of beliefs. Dichotomous ratings were used so that people who had never experienced voices or beliefs (i.e. PSYRATS score was coded as 'not applicable' rather than 0) could be included in the analysis. Use of raw scores would have substantially reduced the sample size and the power of the regression analysis.

#### *Perceived Social Support and Perceived Coping*

Two questions from the ten-item Clinical Outcomes in Routine Evaluation (CORE-10, Barkham et al., 2013) were employed to assess these factors. Question 2: 'Having someone to turn to' indexed social support and question 3: 'Feeling able to cope when things go wrong' indexed coping. Each item was rated from 0 (lowest) to 4 (highest).

#### *Data Analysis*

All data were analysed using the Statistical Package for Social Sciences Version 22 (IBM Corp, 2013). Participants with missing data were excluded from the analysis. Skewness and kurtosis for continuous variables were within acceptable limits to meet the assumptions of linear regression analysis (skewness was between -1.0 and .3 and kurtosis was between -1.2 and -.3 for wellbeing, age, social support and coping; Kim, 2013). To identify the key factors associated with SWB, predictor variables (age, gender, ethnicity, employment status, pathway (signalling first episode psychosis vs. an established psychotic condition), presence of voices, presence of beliefs, and social support) were entered into a backwards multiple

linear regression. Coping was entered as a second step in the regression model because of its potential association with psychotic symptoms and social support. Collinearity was within acceptable limits (variance inflation factors all  $< 1.3$ ).

## **Results**

### *Demographics*

Of our sample, 201 clients were male (49.00%) and the mean age was 38.10 years ( $SD=11.76$ ). 270 clients were unemployed (65.85%), 232 clients were from Black or Minority Ethnic (BME) backgrounds (56.60%) and 309 clients presented through the PR pathway (75.40%). With regards to positive symptoms, 152 clients experienced voices (37.10%) and 180 experienced distressing beliefs (54.88%).

### *Wellbeing Compared to the General Population*

Mean SWB score for the whole sample was 39.09 ( $SD=11.61$ ). Figure 1 illustrates the range of scores compared to normative general population data reported by Stewart-Brown and Janmohamed (2008) ( $M= 50.7$ ,  $SD= 8.79$ ,  $n=1,749$ ). The psychosis sample mean was significantly lower than that for the general population ( $t=19.03$ ,  $df=409$ ,  $p<0.001$ ).

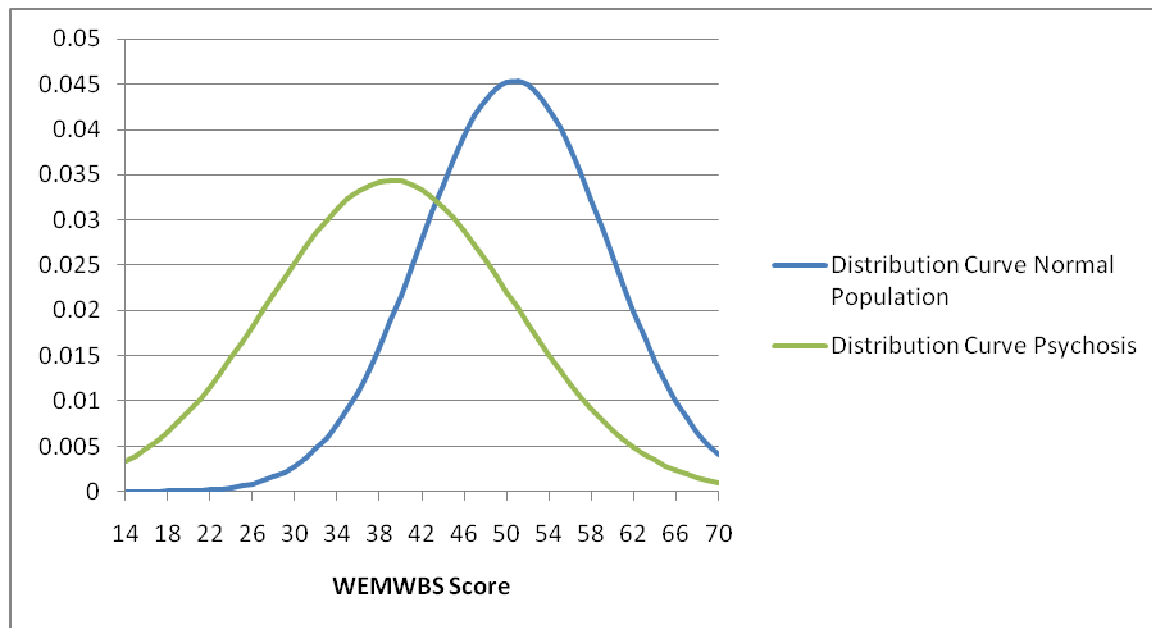


Figure 1: Comparison of wellbeing scores between people with psychosis and a normative general population sample (Stewart-Brown & Janmohamed, 2008). Key: WEMWBS: Warwick-Edinburgh Mental Wellbeing Scale.

#### Wellbeing According to Demographic and Clinical Characteristics

Independent samples t-tests of predictor variables and WEMWBS scores and Spearman correlations between predictors and WEMWBS scores are displayed in Table 1.

Table 1: Clinical and demographic characteristics of the sample and relationships with wellbeing.

<b><u>Variable</u></b>	<b><u>Mean (SD)</u></b>	<b><u>Range, n</u></b>	<b><u>r, p</u></b>
Age in years	38.10 (11.76)	17-70, 410	-0.19, <.001
Wellbeing <sup>1</sup>	39.09 (11.61)	14-70, 410	-
Perceived coping <sup>2</sup>	2.19 (1.16)	0-4, 405	-0.56, <.001
Perceived social support <sup>3</sup>	1.72 (1.35)	0-4, 408	-0.56, <.001
	<b><u>Mean wellbeing score (SD)</u></b>	<b><u>n (%)</u></b>	<b><u>t, p</u></b>

Pathway	PR	38.17 (11.56)	309 (75.40%)	-2.83, .005
	EI	41.90 (11.34)	101 (24.60%)	
Gender	Male	38.99 (11.37)	201 (49.00%)	-0.17, .78
	Female	39.18 (11.86)	209 (51.00%)	
Ethnicity	BME	39.44 (12.14)	232 (56.60%)	-0.76, .45
	Non-BME	38.55 (10.93)	176 (42.90%)	
	Not reported		3 (<1%)	
Employment Status	Employed	43.97 (11.70)	133 (32.44%)	6.24, <.001
	Unemployed	36.60 (10.89)	270 (65.85%)	
	Not reported		7 (1.71%)	
Voices <sup>4</sup>	Present	34.87 (10.83)	152 (37.10%)	5.82, <.001
	Absent	41.56 (11.42)	253 (61.71%)	
	Not reported		5 (1.22%)	
Beliefs <sup>4</sup>	Present	35.38 (10.21)	180 (43.90%)	6.07, <.001
	Absent	42.12 (11.77)	225 (54.88%)	
	Not reported		5 (1.22%)	

*Key: SD: Standard deviation; PR: Promoting Recovery; EI: Early Interventions; BME: Black and Minority Ethnic; <sup>1</sup>Warwick Edinburgh Mental Wellbeing Scale (Tennant et al., 2007) total score; <sup>2</sup>CORE-10 (Clinical Outcomes in Routine Evaluation, Barkham et al., 2013) Q3 and <sup>3</sup>Q2; <sup>4</sup>PSYRATS (Psychotic Symptoms Rating Scales, Haddock et al., 1999).*

### Determinants of Wellbeing

The first, backwards step of the regression analysis reached a final model after four variables

were sequentially excluded over four steps (gender, pathway, ethnicity and age). This resulted in a final model that explained 27% of the variance in SWB ( $F(4,393)= 36.09, p <.001$ ). Unemployment ( $\beta = -.19, p < .001, 95\% \text{ CI } [-6.87, -2.50]$ ), lack of social support ( $\beta = -.32, p <.001, 95\% \text{ CI } [-3.50, -2.02]$ ), voices ( $\beta = -.15, p = .002, 95\% \text{ CI } [-5.63, -1.32]$ ), and beliefs ( $\beta = -.16, p = .001, 95\% \text{ CI } [-5.76, -1.57]$ ) were independently and significantly associated with lower wellbeing scores. Entering coping into this model increased the variance explained to 43% ( $F(5,392)= 58.42, p <.001$ ). Unemployment ( $\beta = -.16, p < .001, 95\% \text{ CI } [-5.79, -1.90]$ ), lack of social support ( $\beta = -.20, p <.001, 95\% \text{ CI } [-2.47, -1.10]$ ), beliefs ( $\beta = -.12, p = .004, 95\% \text{ CI } [-4.60, -.86]$ ) and poorer coping ( $\beta = -.43, p <.001, 95\% \text{ CI } [-5.16, -3.52]$ ) were independently and significantly associated with lower wellbeing scores.

## **Discussion**

We sought to identify baseline determinants of wellbeing in our IAPT-SMI psychosis demonstration site, as a preliminary to a future longitudinal study of change during therapy. Our broader aim was to inform refinements to our current, evidence-based and recommended psychological interventions and maximise their effectiveness in improving wellbeing, in line with national requirements. We considered this approach preferable to the development of wholly novel interventions (Brownell et al., 2015; Riches et al., 2015; Schrank et al., 2015; Schrank et al., 2014). We found that, on average, wellbeing in our psychosis sample was somewhat lower than that reported for the general population, but with a larger spread, overlapping with the normal range. Unemployment, lack of social support, poorer coping and beliefs all contributed to lower levels of wellbeing.

Unlike in the general population (Diener & Chan, 2011; Helliwell & Putnam, 2004;



Inglehart, 2002; Pinquart, 2001), gender, age and ethnicity were not associated with SWB in our sample. Pathway, signaling whether someone was in their first episode of psychosis or had a more established psychotic condition, was also unrelated to levels of wellbeing. However, as raw EI mean wellbeing scores were slightly higher, it is possible that age and pathway, being partially confounded, each masked the effects of the other. The associations of employment and social support with wellbeing were consistent with findings in the general population (McKee-Ryan et al., 2005; Tay & Diener, 2011), as was the strong association with perceived coping (Headey & Wearing, 1990; Miller Smedema, Catalano, & Ebener, 2010), which also paralleled findings from smaller scale studies in psychosis (Meyer, 2001). The relationship between distressing beliefs and wellbeing is consistent with findings from previous studies in people with psychosis (Freeman et al., 2014) and our findings extend reports of lower levels of wellbeing in psychosis to a mixed symptom, inner-city group. The association of voices with wellbeing, while significant when coping was not included in the model, no longer reached significance when coping was added. Findings potentially suggest that coping plays a mediating role in the association of voices, but not of distressing beliefs, with wellbeing. This could be directly tested in future research.

### *Clinical Implications*

Based on these findings, there are several ways in which NICE-recommended psychological therapies could be refined in order to improve wellbeing. These include promoting social contact and inclusion, facilitating a return to employment, and improving coping strategies, particularly for positive symptoms. Should future longitudinal studies confirm the relationship between these factors and wellbeing, this would provide more conclusive evidence that these areas should be prioritised in care planning and that improving SWB should be a key target of psychological therapies for psychosis.

In order to tailor therapies towards maximising SWB, social support could be incorporated into treatment planning (The Schizophrenia Commission, 2012) and social inclusion could become embedded in psychological practice (Mankiewicz, Gresswell, & Turner, 2013). In therapy, this may involve encouraging greater participation in community life and acknowledging people's individual strengths, identities and values (National Social Inclusion Programme, 2009).

As employment was also important for wellbeing in this particular service context, continuing efforts could be made to decrease the stigma of mental illness in the workplace and increase the percentage of people with psychosis in employment (The Schizophrenia Commission, 2012). Providing help with job-seeking and increasing employability through promoting confidence, self-esteem and useful skills could therefore be incorporated into psychosocial interventions for psychosis.

Additionally, given the significance of the effect of coping on psychological wellbeing in psychosis, coping skills could also be prioritised within psychological interventions. For example, adaptive strategies such as support-seeking, cognitive techniques and positive imagery (Meyer, 2001), could be encouraged. The focus of psychological interventions on reducing the adverse impact of psychotic symptoms also appears justified from the perspective of improving wellbeing, suggesting this should continue to be a key target.

### Limitations

Findings are cross-sectional, and therefore causality cannot be inferred. Higher levels of

wellbeing may, for example, improve employability and the likelihood of having supportive social contacts, rather than vice versa, or relationships may be reciprocal. Variables conceptualised as independent may be tapping directly into the construct of wellbeing itself, thereby inflating apparent associations. For example, individual items on the WEMWBS may have been closely related to predictor variables, such as coping ('I've been dealing with problems well'), employment ('I've been feeling useful') and social support ('I've been feeling close to other people'). However this limitation applies to similar studies in the field. Wellbeing, coping and social support were all self-reported, and although there is evidence for the reliability of self-reported wellbeing ratings for people with psychosis, the CORE-10 item ratings are unvalidated as single item measures, and variance in scores was limited. While this study adopted a particular and unitary definition for SWB, there may have been other potential ways to define and measure SWB more accurately or comprehensively. However, disagreement surrounding the definition of SWB in the literature reflects the complex and multi-faceted nature of SWB (de Cates et al., 2015), which is a limitation inherent in all studies of wellbeing. Stepwise regression models, through repeated testing, risk 'overfitting' and further inflating associations; the model should be considered to be preliminary pending further longitudinal testing (i.e. with a new dataset). The study was carried out within a particular service context, and the findings need replicating before they can be considered to be generalisable outside this setting.

### *Future Directions*

Future studies should adopt a standardised definition and measure of wellbeing so that findings are comparable across studies. Qualitative investigations of service user views could be carried out in order to establish the components of SWB in psychosis, and whether these differ from those identified in the general population (Schrunk, Riches, Coggins, Tylee, &

Slade, 2013). Longitudinal research is now indicated to clarify the causal relationships between potential psychosocial predictors and change in wellbeing; our IAPT-SMI cohort will offer an excellent future opportunity to test candidate predictors, once therapy is completed.

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